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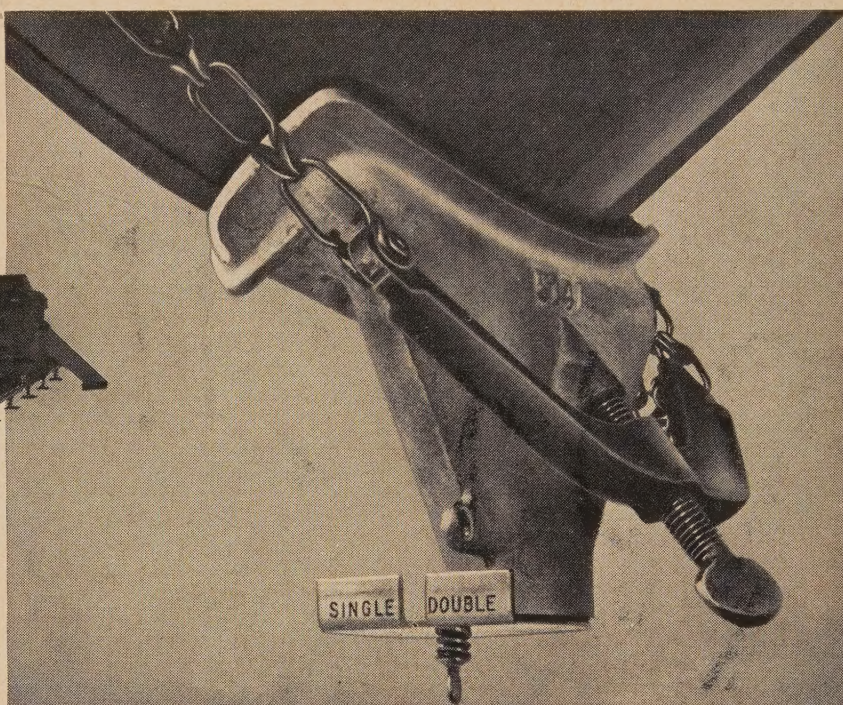
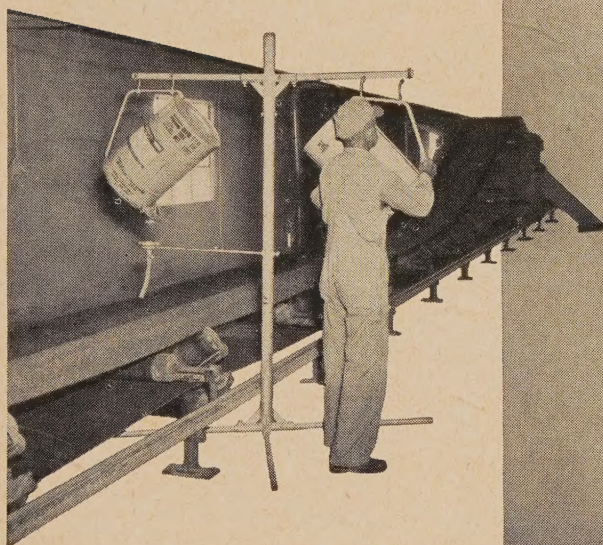
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# Industrial Engineers and Accident Prevention

By DR. LILLIAN GILBRETH

THE industrial engineer is increasingly getting a place in industry and in related fields all over the world. We not only have in the United States a National Management Council, and in Canada a Canadian Management Council, but we have an International Council in the field of management, meeting every 3 years in one or another great city in one or another of the co-operating countries.

## Questions Are Important

In the first place, we are a questioning group, and if most of my material is in the form of questions, that is the way we work. We are interested more than anything else in the elimination of waste. We are asking continuously and all the time, "Is this thing necessary? . . . and, "Why is it necessary?"

It doesn't seem to me we have to go very far in the field of accident prevention in order to say that there is nothing more wasteful than an accident. The human waste is the greatest of all waste, and an accident is a calamity, of course.

Now, there are some people who really do not agree with this viewpoint. We have the phrase, "It was a lucky accident." Well, I just can't see how any such adjective as "lucky" can be applied to such a thing as an accident. I have heard people say, "It was a lucky thing she broke her arm (or her leg or her neck, or what-not), because it gave her a little time to rest", or "because it gave the family some idea of what she did for the public, some chance to appreciate her."

## Big Price To Pay

It seems to me you might say exactly the same sort of thing about a person who died. She will, we hope, if she deserves it, have some rest, and she will, we hope, if she deserves it, have some appreciation. After all, it is a pretty big price to pay. It does seem as if there might be ways of getting both rest and appreciation in a less painful way.

We, in industrial engineering, think we can perhaps supply time and energy and rest and recreation and

also enough consideration of human need for appreciation . . . and what greater human need is there? . . . so they may enjoy that in a more active fashion.

We look all over the world to try to see where these problems of accident prevention of rehabilitation, strike. Is there anybody really who isn't handicapped to a certain extent in this field?

One of our men in a related field, the personnel field, spent a year or two in Sweden, trying to find out how many people were handicapped, at least some of the time, in one way or another way . . . how many jobs were open to them. When he got all the way through he decided most people were handicapped at least some of the time and that most jobs were available to most people, if enough people of different backgrounds and training cared enough to try to develop their inward capacities.

## Partially Handicapped

Let us list a few of these people who really are handicapped at one time or another.

There are people who are tired, and who isn't? I think the accident prevention group in industry and out, have demonstrated very well the close co-relation between fatigue and accident-proneness.

People who are ill. Some people with certain illnesses are much more prone than others, but everybody goes off the beam temporarily or at some time is handicapped and accident-prone.

The very young, in many ways. The young, in many ways. The youth with that exuberance, and courage and attention which flickers constantly . . . the sort of thing you see in the home and in the school and on the streets and everywhere else. The wonderful thing we love and cherish, but closely tied in very often with danger. You just have to look about when school is let out any place in your country or mine, any day, to see exactly what I mean.

The very old. Not calendar age old necessarily. We are finding more and more that calendar age really doesn't

mean a tremendous amount. They are the ones whose reaction time perhaps has slowed down or for some physical or emotional reason which may attack any of us at any time, have temporarily or permanently slowed down, as the saying goes, and again are subject to danger.

## Women Workers

Women don't like to be placed in the handicapped group, yet you can't have been in industry or business for many years without seeing that they have special problems which they have to solve, very few of which really are inherent with the fact they are women, but most of which are tied in with the fact they seem to feel in some way being women is a handicap and therefore provides all sorts of situations, some of which are designed to be helpful, many of which I think are really designed to be helpful, but some of which, unfortunately, do not turn out to be so.

There are two or three little things, such as the wearing of high heels and a few other things which most of us enjoy, not so much perhaps because anyone else admires them, but because they give us a little feeling of security and serenity and being up with the times which the Accident Prevention people seem to feel that some of us indulge in.

But I don't believe really, certainly when you come to the industrial world, that we have been a very great hazard to anyone. As a matter of fact, I think in many cases we have made a very real contribution.

## Improvements Through Women

In our war plants, and I suppose in yours, too, where women came in where women had not been before, out in the industry and on those machines, all sorts of things were done, either because they needed them or someone thought they needed them or someone thought they would like them. Lighting was improved and pavements were improved and the ways of getting in and out of the plant and all sorts of reconstruction and expansion of rest rooms and food facilities, and so on.



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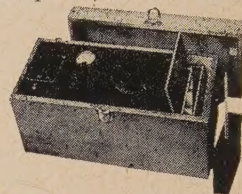
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## Dielectric Moisture Meter Checks Various Materials

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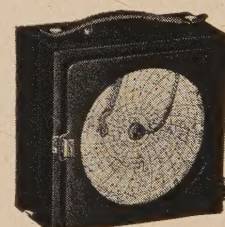


To use, a weighed sample is placed in a cell inserted in the instrument. The meter shows the material's capacitance, which simple tables convert into percent moisture. Chemicals, dehydrated foods, soaps, flours, seeds, plastic molding powders, iron ore, coal, cheese, coffee, corn, grain, dried leaf, flue dust, starch, yeast and cottonseed typify materials tested.

## Temperatures in Mobile Units Charted by Miniature Recorder

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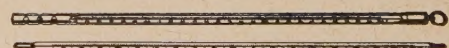
Corp., Newark 5, N. J. This new instrument, known as the TAG Model 8475 Miniature Recorder, requires no connection to any power supply, yet charts temperatures for as long as seven days without attention.



Its unique design eliminates need for shockproof mounting. Temperatures as low as  $-30^{\circ}\text{F.}$  or as high as  $+220^{\circ}\text{F.}$  can be recorded. The instrument measures  $5\frac{3}{4}'' \times 5\frac{3}{4}'' \times 4\frac{1}{4}''$ , and weighs  $3\frac{1}{2}$  pounds.

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I know in one plant where I worked I went around with the people before the women came in and saw the quarters that were turned over to them and I really wonder how men had been so patient as they had been. We did a lot in reconstruction and prettifying. I don't know how much it attracted or held the women, but I do know when the swing shift came and we had no women working on the swing shift the men used to come to me and say, "There are no ladies here tonight . . . do you suppose we might go and see the palatial rest rooms they have with all sorts of lotions and creams and Heaven knows what, which we never have had?"

The aftermath of the whole thing has been very often when the women moved out . . . not always, let me say, because they wished to . . . when they had moved out the men took over and really had much better and very well deserved facilities which they certainly would not have had if women had not been there at least for a time.

#### People With Disabilities

Another group, of course, which we always rank as handicapped, are the people who really have either physical or emotional disabilities and I know you agree with me that the record of the group that had physical handicaps during the last war and between the wars, and any time they were given a chance, is certainly something really wonderful. The eagerness with which they take over jobs, the faithfulness with which they do these jobs, the way in which absenteeism dies down, the long term record of high efficiency speaks for itself.

There, again, one pays tribute to the accident prevention group, because not one of these men but are maintained with the support of your group. It might well be the personnel man, and of course, he would have seen the doctor and the supervisor and possibly somebody from biomechanics, we would hope, someone who would condition him for the job, and also the safety man would be there to make sure that everything was done to see that accidents could be prevented.

Also there came with this man or woman from the special training they had had, whether they were blinded, had had polio, or were deafened or an amputee, or whatever it was, somebody who knew him and what he could do, somebody who went with him to the job, somebody who ex-

plained to us carefully each time that in ordinary circumstances probably your physically handicapped people, even our blinded ones, were safer than anyone else because they worked safely and stuck to it. Only in careless emergency, when someone dropped oil or left boxes where they shouldn't be, only in such situations would someone near by have to take over and lend a hand so the person didn't get in to any situation where an accident could happen.

I think the records speak for themselves in this field. It is thrilling to talk to some of those who are emotionally handicapped, to see the amount of work being done in that field, too, in this country. I have talked to many of the Foundation people, the psychiatrists working in that field, and the other psychiatrists throughout the country, and I am sure if more and more such people can come in they wouldn't be accident perils if properly handled.

#### Fringe Conditions

Also, of course, there are all this group who are sort of on the fringe of being handicapped and never very much considered. I want to mention only one, and they are the women with heart conditions. If a man has a heart condition in an industrial or business job, his doctor will usually make out some sort of paper he can carry back to the job, so the people will know what he can do and what he shouldn't do.

If a woman, especially a homemaker, develops a heart condition, she is usually told to go home, do as little as she can, wish jobs on everyone else, to go downstairs only once a day, and so forth and so on.

Now, I am mentioning this woman for two reasons. One, because I did want to say something about the project; two, because it shows the close relationship of all these fields to one another, because you and I in business and industry, know what the situation does to every member of that woman's family. Her husband is worried and tired and upset and brings that to the job. The children take it to school. It isn't only the home situation, but it affects all that group, the entire family and kin and friends are affected by that sort of thing.

#### Kitchen Project

The New York Heart Assn. decided to set up a little model kitchen to see if they could show how to save time and energy for a person who had this problem.

The interesting thing about this

project was it also was a group project. Of course we could have a competent Home Economics woman come in and set up a kitchen highly satisfactory in many ways, but no one group can do any project these days alone. Instead, we had a committee with every sort of people on it: a doctor, of course, a heart specialist, a physiologist, somebody from physiotherapy, and somebody from occupational therapy, a family relations person, a home economist, an industrial engineer, and, of course, a safety person, to be sure nothing was put in that was a peril, and it was very interesting.

It wasn't difficult to work out principles . . . they are all there. We knew we should have the work limits, the proper work grouping. We knew we must select things light and easy to move. We knew we must try to work through every situation and get every group to get the answers of everybody, representing every discipline through his ideas.

We tried to set up a kitchen which would satisfy every group there. Our really great difficulty was in getting equipment which at all matched up to the needs. Our next difficulty, of course, was in getting things within the price level of a great many people. We made a lot of our things. We wanted to demonstrate that a co-operative family and neighborhood could be a help in doing that sort of thing.

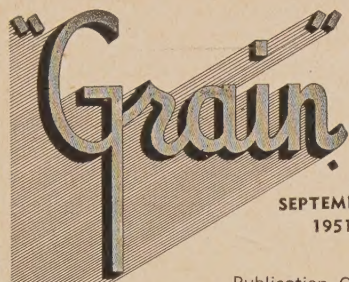
So we made our Lazy-Susans, and we adopted very easily, very plain little carts on wheels so she could push her supplies about. In fact, we went rather wheel crazy. We not only put her chairs on wheels, not only the four legs, but the back was put on wheels too, so she could push it around, and when she was quiet it would stand still. A lot of women who sit on a chair with four wheels feel as though they are sitting on a cat or something equally intangible. And then we put her ironing board on two tiny wheels.

#### Family Relations

Every group represented came in with its own odd idea. Our mechanical engineers insisted that we put a magnet on the side of the kitchen cabinet so if she dropped a knife, instead of going down to the floor it would click to the side of the kitchen cabinet and stay there.

I could go on and on and tell you what our family relations people did. We were a little worried lest she could not be as good a mother as she had been before. We thought we might help her to be as good a house-





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wife. So we said we would put in a rocking chair so she could rock forward and haul the child up . . . she can rock for a little while and then slide the child off again. No fatigue anywhere.

The Physical Education person spoke up and said, "If she will do the job properly she won't need that kind of thing, because if she took a long breath to expand her lungs and bent her knees instead of her body, that wouldn't hurt her at all."

I bring this as a challenge, whoever you are, and whatever you happen to be doing, because every group and every individual in the group not only has a responsibility to the one group like this, but a responsibility, it seems, to all the related groups.

I brought the little pamphlet that the American Heart Assn. gets out. It is called "The Heart of the Home". We wanted to call it "A Woman with a Heart Condition", but our psychosomatic medical man said, "If you give her the idea she is a special kind of person because she has a heart condition she will worry so much that nothing she does will be of any use", so we looked around and called it "The Heart of the Home", and the Home Economics people seemed to agree with the suggestion that the kitchen can be the heart of the home . . . anyway, they took it very kindly.

Does this sort of thing run through all areas of life? We Industrial Engineers believe it does and all these areas of life are so closely connected that you really cannot solve the accident prevention problem completely if you interest yourselves only in what happens in business, in industry, in traffic, in the home, in the school, or anywhere else. We like to look at it as including people all through their lives and in every relationship of their lives.

### Thinking In Safety Terms

I have given to you the question whether, after all, accident prevention is not very largely the habit of thinking in terms of safety. One of the great contributions of the Safety Group, and especially those working in industry, it seems to me, has been that they have made thinking in safety fashionable.

I can recall when to take a dare to run a risk was just something heroic. Every boy and girl was brought up to think that to run risks was terrifically smart and the Safety Group took a great step when it went out and tried to show that it just

wasn't smart at all, and that if you thought in terms of safety and carried that through all your relationships of life, that in the end you really had more to give than if you used the other technique.

It is just like the habit of saving. After all, you don't save to save . . . you save to spend. You don't play safe, you don't regard the safety rules, after all, just to go on being safe, but so you can accumulate experience and time and energy and inclination and willingness and desire to serve with it.

That, we feel, was a great point. We would like to see every child coming into this country following through, every child in this hemisphere, in this world, following through from the first day in every relationship of life.

### Industry's Job Is Creditable

I think, by and large, industry's job has been a very creditable one. As we were saying, at the luncheon here, it has been a hard job. We are naturally supposed to be the great sources of danger . . . machines, very rapidly moving machines, belts and great pieces of equipment, and materials going through. Yet, year by year, the record gets better . . . partly, I think, because there are safety people in every intelligent plant all around the world, but more, I think, because we have been able to convince industry that safety is everybody's job and of course that is a well known slogan.

So, while in the majority of cases it may not be smart or good procedure to go over somebody's head or do something that isn't in your area or walk softly in any way, when it is a matter of safety the man who is there speaks up and tells everybody and calls out and his first responsibility is to see that the safety job is done there.

How about transportation? Well, I happen to work in New York most of the time. Once in a while my family feel that I go into perilous travel situations. I tell them I am safer anywhere else in the world than on the streets of New York.

It isn't because there isn't really a pretty good system, but it is because nobody pays any attention to it, and especially not the policemen. We have lights, it is true, but you don't dare start on anything but the beginning of a light and many times you stand all through the light while people round the corners. I think you may have to have helicopters to get across the streets after a while.



But because the traffic men just feel getting the traffic moving is the proper thing, and they never see the lights at all, we are sort of used to it there. Probably in the long run they live a little longer than our visitors and guests. They live in more enlightened communities where lights are really paid attention to by everybody. When they see the light is green they confidently go ahead and it is only the experienced people who have to dodge these every day of their lives and who haul them, sometimes protesting, to safety; they are really the only reason why a large proportion of them ever complete their journey across the street at all.

I won't talk about pedestrian safety. Plenty of other kinds are involved. But, by and large, I think the world is alive and conscious of what is going on.

### Home Record Is Bad

The home really has the most discreditable record and none of us seem to know why. I wonder sometimes if we hadn't better go to every piece of equipment in the home and see what people actually use it for, and then make it to fit that use.

If people are going to climb on radiators, why don't we have radiators they can climb on?

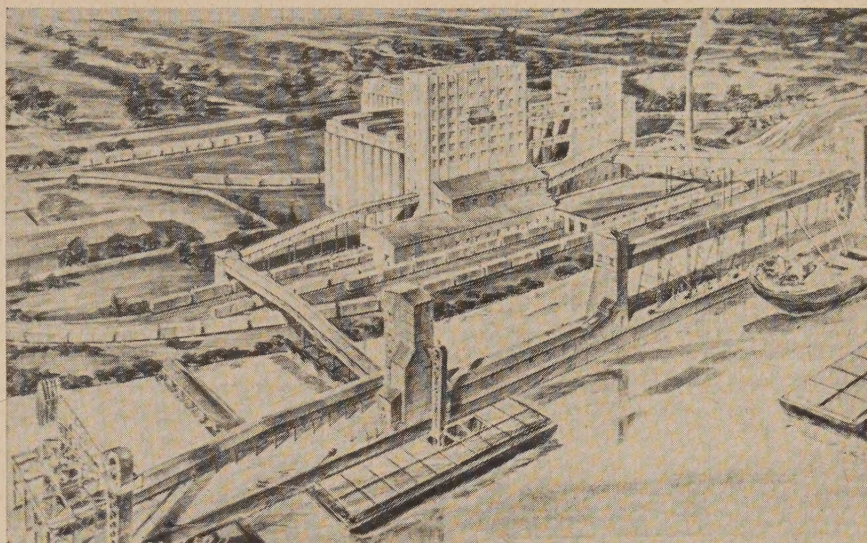
If people are going to fall off beds, why don't we put the beds down? After all, it is rather a job to make them. I am sure my physically handicapped people would have a right to protest loudly. Some of us making beds would have to bend over . . . it might not be so bad as far as waistline and grace and some other things are concerned.

If people are going to slip on floors, why don't we do something to make them non-slip?

If people are going to sit on the rim of the bath tub . . . right in my own family, a kin, sat on the bath tub the other day—she didn't die but she broke her neck and is going around with a sort of cage, indefinitely . . . why under the sun don't we make the rim of the bath tub so people can sit on it?

If people are going to grasp the so-called safety devices on the side of the tub, why don't we make them strong enough so a really heavyweight dares to use them?

Probably many besides myself read the account in one of our magazines not long ago, where the poor man was crippled. He got in all right, he grabbed the support all right. The thing came out. He was in a hotel bedroom. There was nothing he



This is an artist's conception of proposed additions to the Public Grain Elevator at the Port of New Orleans. The new facility will be located approximately 85 ft. above the present structure. With this additional storage the elevator's present capacity of 2,622,000 bus. will be nearly doubled. Ability to unload and receive grain from rail cars and barges will also be doubled by the addition of car unloading facilities and an extra marine leg, also shown.

could do so he just loudly raised his voice. People thought it was the after effects of a very gay night and it was a long time before anybody came to his rescue.

Another thing which of course I won't stress too heavily is the fact that some of the accidents in the home are not the fault of anybody in the home. You have the sink up, thank Heaven, and I hope to live until the oven goes up, although I am at times not sure of it.

You only have to work in any situation where you see people facing accidents or really having accidents, to know exactly what I mean.

We hope, of course, that public buildings can make a great advance, not only so that accidents can be eliminated there . . . and really, I think the most slippery floors I have ever seen have been in public buildings and after the architects and everybody had done a good job let me tell you the men and women who clean them up certainly leave the work surface temporarily or permanently in such a way that your life is actually in danger.

### Vocabulary Needed

My favourite accident, if there be such a thing, happened in Indiana. I was coming to the station . . . it was winter time and it looked a little icy to me and I said to the conductor, "How is the weather out?"

He said, "Slick."

In New England, "slick" means smooth . . . something you admire or you do not admire . . . it means on the whole, everything is going pretty well.

But I found out what it meant in Indiana when I got off the bottom step. I landed about a block away. The conductor said, "What is the matter with that woman? I told her it was slick."

Vocabulary has a certain part to do with the thing. The home, after all, is the place where the habit is made.

The future is long and worth looking for. I am very optimistic about the future if you and I take over our jobs. Perhaps this is a job we can start at once. Let us take it on and let us go into a future, free of accidents, free of so many things we dislike. Let us go together, courageously, with great hope.—*Before the Industrial Accident Prevention Assns., Toronto, Ont.*

### ACTIVITY IN NEW ORLEANS

Grain unloadings at New Orleans from barges for the first seven months of 1951 were 16,147,951 bushels. The figures, submitted today by C. J. Winters, superintendent of the Public Grain Elevator, showed that these unloadings from January 1951 through July compare with the highest postwar year of 15,543,095 bushels for the total year 1948.

He pointed out that while this does not comprise by any means all of the grain receipts at the elevator, it is a good indication, not only of bulk grain unloadings, but also of the increase in barge activity.

The ability to unload bulk grain from barges will be doubled by the extra marine leg to be included in the proposed new additions to the elevator. E. H. Lockenberg, general manager of the Port Commission, said that plans are now under way for this expansion program.



**YES,** whether you want one tank or a complete storage system, Marietta engineers and erection specialists can design and quickly erect a modern grain storage installation to fit your particular needs—and do the entire job in record time without disturbing your daily routine.

When you have a Marietta storage system you reduce spoilage and waste because Marietta's unique Air-Cell concrete stave construction locks out moisture and air—keeps grain **BONE DRY!**

Sturdy Marietta tanks are wind and fire proof—built to endure—will provide you with dependable, low cost year 'round storage—and should substantially reduce your insurance rates.

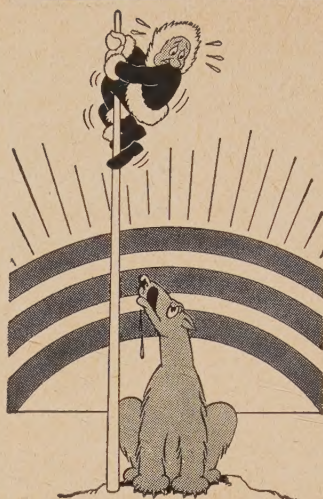
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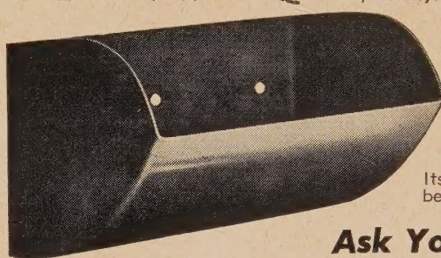
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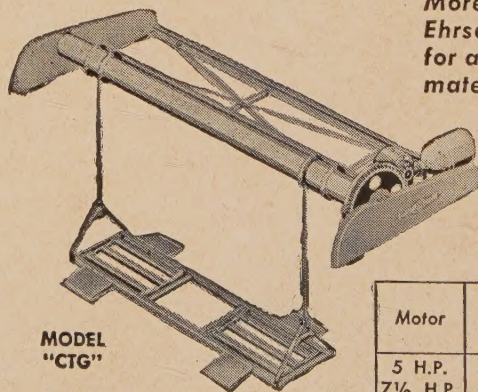
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# Why First-Aid Fire Protection?

By CHARLES E. HARBIN  
*Manager, Underwriters Grain Assn., Chicago*

A RECENT article advocated that instruction be given to elevator employes in the proper kind of extinguishers to use on various types of fires and how to use these extinguishers. The normal reaction to this seems to be covered in the question: What use is first-aid fire protection in an elevator? I wouldn't go into an elevator that was on fire, so I cannot see that it is of any value. It is the answer to this question which I would like to dwell on for a few minutes at this time.

There is no one who does not value human life above property. There is no one who would expect a man to jeopardize his life in an attempt to save property. There is no one who would ask an employe to enter an elevator where fire had attained considerable headway. We can agree perfectly with anyone who says he would not enter such a risk. We can also state that a burning elevator is beyond help from first-aid fire protection, and that entrance to the building would be futile even if attempted.

First-aid fire protection is exactly what its name implies, just as first aid accident treatment is something that must be done promptly and quickly.

## Small At Beginning

Every fire, regardless of its intensity, was at one time a small fire, possibly only excessive heat or a smoldering pile of dust. A fire that, at that particular moment, would not endanger human life. Possibly within a matter of minutes it might enlarge and spread to a point where it would not only menace the property but endanger lives. It is in these few minutes that first-aid fire protection is of value.

If a man sees a small, smoldering fire or an excessively hot bearing, or a charred belt caused by a choked leg, he can do little about it unless he has the tools to work with. First aid protection are the tools which he needs and he needs them promptly and in good condition.

Your instructions from the Fire Chief in your city have undoubtedly told you that it is unsafe to forcibly apply water to smoldering dust piles, or that it is dangerous to use water by itself or from an extinguisher, predominantly of the water type, on

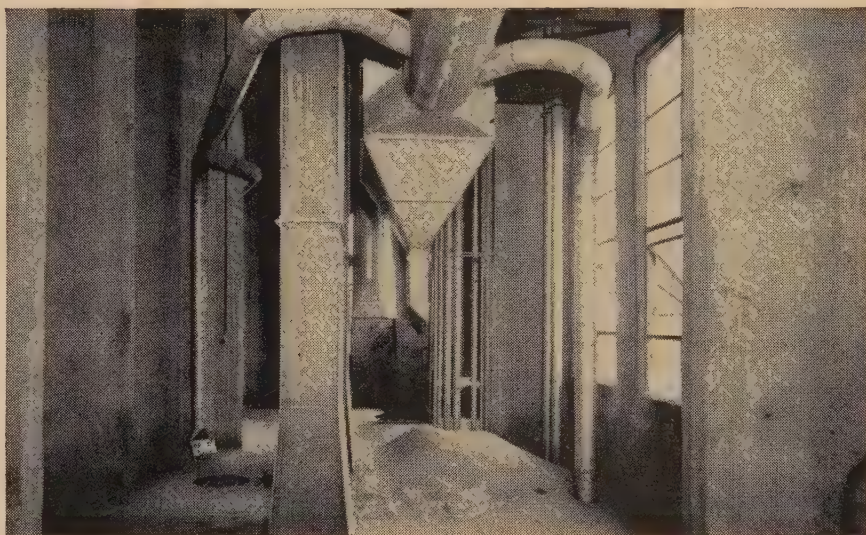
electrical equipment. The instruction has probably informed you that in an oil fire the use of water would only cause the fire to spread over a larger area. Your instructions have probably pointed out the different types of extinguishers and how they should be used.

We will not attempt to elaborate

on this subject at this time, bringing it up only to point out that different types of extinguishers must be included if adequate first aid fire protection is to be provided.

In the minutes available for fighting this small fire, it would be most uncomfortable to attempt to use a piece of equipment only to find that

## WIEDENMANN GRAIN TRAP PREVENTS GRAIN LOSSES



Here's a good example of the careful planning that's engineered into all Wiedenmann Dust Control Systems. The above photograph shows a mound of whole grain saved from the dust bin by the Wiedenmann Grain Trap installed ahead of the exhaust fan in the air-stream piping. An installation, similar to this, saved one large Kansas City elevator over 2000 bushels (worth about \$4000) of grain in a single year. Instead of being lost in the dust bin, valuable grain was recovered for sale at its full market value. And by filtering heavy grains and miscellaneous particles out of the air stream, the Wiedenmann Grain Trap prevents costly damage to exhaust fan and steel housing. You actually save enough money in maintenance costs and recovered grain to pay for your Wiedenmann Dust Control System over a period of time.

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through neglect it was not usable. The delay in looking for a second piece of equipment might be enough to prevent extinguishment of the fire which had been discovered. Neither would it be practical to traverse great distance to obtain the equipment needed.

### Rulings Are Practical

That is why the underwriters have ruled that there shall be a proper piece of equipment for each 2,500 sq. ft. of floor area in buildings of combustible construction; or one piece of equipment for each floor if there is less than the above area. It is why they recommend that a type of extinguisher approved for use on electrical fires shall be located in the vicinity of each motor or group of motors if they are closely grouped. It is why they ask for an extinguisher approved for use in combating oil fires be located in oil storage rooms where this type of fire might occur. It is why we advocated in a previous article, that each employe be trained to know exactly how to use this equipment and what-equipment to use.

One does not have time to read the instructions as to how to use an extinguisher in time of need; nor does he have time to experiment with this extinguisher. Equipment must be handled promptly and effectively if the property is to be saved or to prevent jeopardy to life. Small fires, hot bearings, smoldering belts, hot motors, or other evidences of fire need not be cause for alarm if they are discovered promptly and proper treatment given immediately. To give this requires a complete installation of well maintained extinguishing equipment of proper types, with personnel familiar with their use.

*Do you still think that first-aid fire protection is not important?*

### NEW LITTLE ROCK STORAGE

The modern grain storage system shown here, planned to provide year-round, fully protected storage facilities for 150,000 bus. of grain, was designed and recently erected by The Marietta Concrete Corporation, Marietta, Ohio, for the North Little Rock Dryer & Storage Company, North Little Rock, Arkansas.

The installation consists of 10 Air-Cell tanks, each 18 ft. in diameter, 60 ft. in height, erected in two lines, forming four star bins in between and resulting in an efficient, easy-to-operate grain storage system.

Each tank is constructed of Air-Cell concrete staves made with lightweight aggregate, a Marietta develop-



New grain tanks of North Little Rock (Ark.) Dry & Storage Co.

ment that is used for grain tanks, industrial storage systems and farm silos that require high strength, lightweight, permanent construction. An Air-Cell stave weighs about 60 lbs., is 4 in. thick, and contains five air pockets or cells, for added strength and better insulating qualities. Staves have tongue and groove edges for quick assembly, and to provide airtight, moisture-proof storage tanks that keep stored materials bone dry.

The interiors of all Marietta tanks are given a special coating and an aluminum asphalt paint is applied to exteriors. It is claimed that tanks constructed the Marietta way often reduce spoilage from moisture and sweating, eliminate maintenance, and, because they are durable and resistant to wind, fire, freezing and thawing, usually bring about a substantial reduction in insurance rates.

### HOURLY WORKERS GET VACATIONS

A survey of industrial firms, just completed, shows that more and more hourly workers are getting three weeks of paid vacation. The most prevalent practice is to give hourly workers 1 week of paid vacation after 1 year of employment, two weeks after 5 years' employment, and 3 weeks after 15 years.

The practice of granting annual paid vacations to hourly workers is now about as common as the granting of such vacations to "white-collar" workers.

### FARM LEADER ASKS ECONOMY

Urging pay-as-we-go taxation and pay-as-we-go spending, Allan B. Kline, president of the American Farm Bureau Federation, has recommended big cuts in appropriations for the Department of Agriculture. He said the government should make a drive for strict economy to control inflation.

Mr. Kline suggested a reduction of \$30,000,000 in the Agriculture Department's administrative costs, and a cut of \$135,000,000 in conservation funds for fiscal 1952.

"All non-essential Federal expenditures must be reduced to the minimum for the national interest, essential world aid, and adequate national defense," he emphasized.

### THE HONOR ROLL

AS CHAPTERS go, Omaha is still leading the others in the current SOGES Membership Campaign. The individual leaders are by no means secure in their present position. Although the race is lagging slightly behind that of last year, many have written in to say they're working on prospects. It may be a tight battle to the finish line.

Vincent Blum, Omaha	4
Donald Burke, Omaha	3
Jerry Lacy, Omaha	2
Earl Mahan, Council Bluffs	2
Charles J. Winters, New Orleans	2
W. R. Appleman, Chicago	1
A. R. Bourdonnay, Ft. Worth	1
Vern Erickson, Spokane	1
Lloyd Forsell, Chicago	1
John Goetzinger, Omaha	1
Harry Hanson, Chicago	1
Lewis Inks, Akron	1
A. W. Johnson, Seattle	1
Jack Kitching, Buffalo	1
R. K. Krebs, Kansas City	1
John Mack, Buffalo	1
Lee McGlasson, Seattle	1
Edwin C. Murray, Oakland, Calif.	1
Ted Musser, Erie, Pa.	1
Ernest Ohman, Minneapolis	1
Kenneth Sacre, Minneapolis	1
Herbert Sales, Omaha	1
Dale Wilson, Chicago	1

Total 31



# Problems of Wet Grain Studied

**D**AMP GRAIN heating is one of the most alarming and rapid forms of deterioration to which grain is subject. This phenomenon invariably occurs in grain that is stored when the water content is high, with the result that grain with a water content of more than 16% cannot be safely stored. Most grain exporting countries set an upper limit of 14% for transport by ship in bulk.

## Rapid Heating

Grain which has been stored wet will lie quiescent for a few days or weeks and then appear to become hot quite rapidly. In some cases the grain will become so hot that it cannot be held in a person's hands. The bulk of the grain will steam and the kernels on the surface will sprout and spoil, usually becoming obviously moldy in the process.

Sprouting and spoiling is usually limited to the surface of the bulk, the main body remaining fairly dry but dull in appearance. The germ of grain so affected turns dark or even black. This grain is usually

referred to as 'bin-burned' and is quite unsuitable for milling purposes.

## An Economic Problem

This heating damage in stored grain presents quite an acute economic problem in Canada and the United States today. Since these two countries usually have to store large quantities of grain, it has been found necessary to dry damp grain to below 14% moisture before storage is attempted; all at enormous added costs to producers and grain handling firms.

## Spoilage Factors

It has been generally accepted that this spoilage is caused by one or a combination of several factors. One theory was that heating is caused by the respiration of the dormant but living germ. This theory is quite valid since it is a common phenomenon of grain to start showing signs of life in the presence of moisture and favorable temperatures.

Another theory was that heating is caused by infestation of certain in-

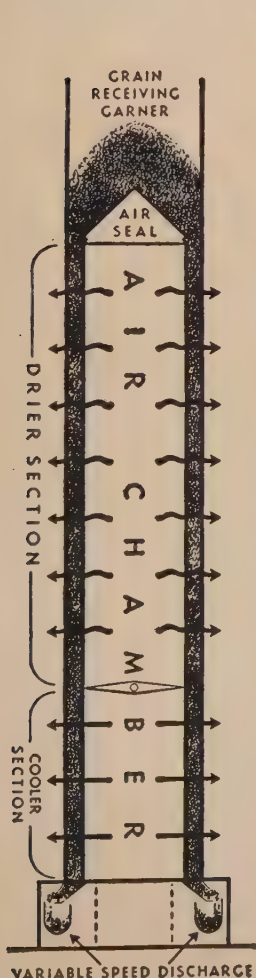
sects, whose metabolic products create moist pockets where respiration is speeded up.

## Molds and Bacteria

One of the latest theories to be advanced attributes the self heating of stored grain to the activity of spoilage organisms—certain molds and bacteria, the heat being a product of the chemical changes involved in the spoilage.

Certain experiments appear to have established the fact that molds and probably certain bacteria were responsible for the heat produced in laboratory samples. Some investigators discovered that only part of the heat rise in laboratory samples could be attributed to normal respiration of the grain.

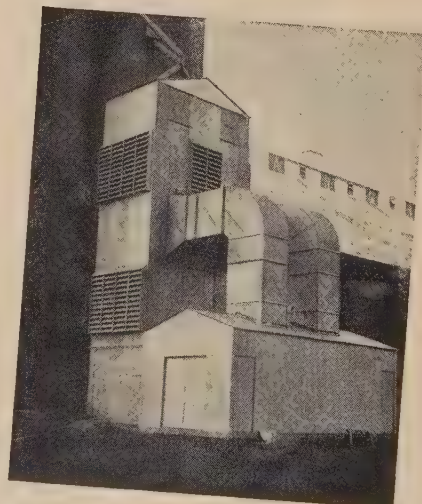
Dr. William Leach, professor of botany at the University of Manitoba, showed experimentally that heating was not related to respiration of the living wheat kernel. He proved this by removing the germ from the kernel of wheat and placing the kernel



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in conditions which favored heating of grain. He found that the kernel without the germ produced as much carbon dioxide as did normal kernels.

Dr. Leach concluded that the rise in carbon dioxide in either type of kernel must have been due to some factor other than the normal respiration of the kernel. Because the moist samples invariably developed evidence of moldiness, he claimed that molds must have been responsible for the increased output of carbon dioxide in moist samples over the amount produced in samples at proper storage moisture.

Either the increase in heat or in

carbon dioxide may be accepted as evidence of spoilage by bacteria and molds. Proof of the part played by organisms of grain in heating is quite involved and it may take years to establish that organisms are really responsible for this phenomenon.

#### Problems To Overcome

Dr. Norman James, professor of bacteriology at the University of Manitoba, who has been working on this project for five years, has outlined some of the problems which have to be overcome. He maintains that before one could establish this theory, one would need to have a

sample free of all bacteria and molds as a check sample for the experiment. This appears to be impossible, for so far no such sample has been found, and attempts to remove all organisms from a sample have failed. Any treatment that would do that would at the same time kill the germ, so that the treated sample would not provide the control that is needed in the experiment.

According to Dr. James, the best thing that can be done is to have as complete information as possible on the organisms on the sample before it was heated and similar information on the same sample after heating. It might be possible then to find whether certain types of organisms increased with the heat rise.

If that were the case consistently and with samples from various sources, the evidence would be rather convincing that those organisms caused the heating. Further, if heating could be hastened by adding large numbers of the types of molds and bacteria involved to a sample of the same grain, the results might be accepted as satisfactory proof of the cause of heating.

#### Adiabatic Chamber

This line of reasoning has led Dr. James to an adiabatic chamber experiment. This is an experiment which gives information on the total rise in temperature in a moist sample of grain during the period of heating. The equipment provides against loss of heat by conduction or radiation.

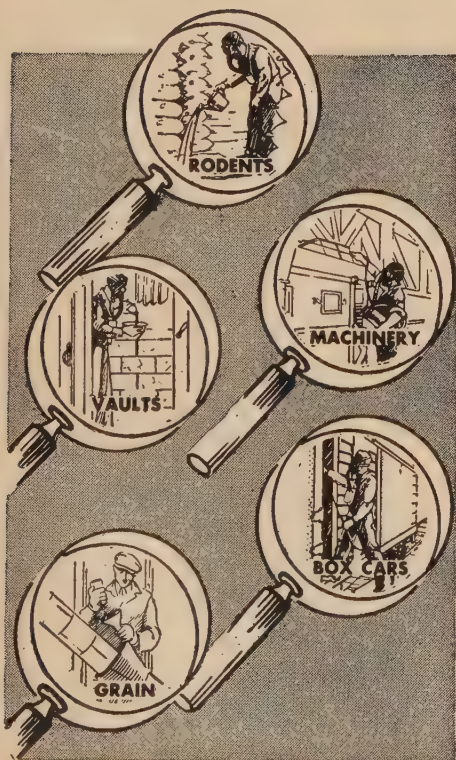
The chamber consists of a well insulated box, inside of which a thermos bottle is placed. It is provided with a heating unit that works intermittently and is controlled by a beam of light and a photoelectric cell, something after the fashion of the "seeing eye" that opens a door when one crosses a certain spot entering a self-opening door. The equipment is standardized so it will not lose more than 0.1 degrees of heat per day.

This "seeing eye" working in conjunction with a thermoptic, a galvanometer and a mirror, operates a relay which connects the current that heats the adiabatic chamber. When the air around the thermos is raised to that of the material in the thermos, this acts to break the circuit to the heater.

The samples of grain before being placed in the thermos undergo moisture tests, germination tests and detailed study of numbers and kinds of organisms on the grain. Enough water is added to raise the moisture level to that desired in the experi-

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ment at this stage. Dr. James is using grain of 22 to 25% moisture content.

#### Procedure Becomes Simpler

The procedure then becomes more simple. The temperature of the grain is recorded day after day until the maximum temperature is passed. The sample is then removed and studies on the molds and bacteria repeated. Many such runs are needed to establish any relationship between any kind of organism on grain and heating.

What is most perplexing in such an experiment is that many things can go wrong and spoil the experiment, and many things have gone wrong with the experiments at the University of Manitoba to date. The equipment is so sensitive that failure of the electric power supply for as little as 10 seconds at any critical time during the five weeks of one experiment or the sticking of a relay during that period means starting afresh.

However, there is a thrill in mastering something that is not easy, and results obtained to date, even though not perfect, do promise ultimate success. The experimental sample does heat, and it gets much hotter than the hot-spot of natural heating—undoubtedly because of less dissipation of the heat produced in the adiabatic chamber.

The temperature rises rapidly 10 degrees or more per day in the early stages of the heating. The sample not only becomes hot, but it will no longer germinate when tested by the procedure used on the sample before heating started. It appears dull and dead and the presence of certain types of molds can be demonstrated.

#### Mold Types

The types of molds found are somewhat different from those found on the original sample. They represent types that thrive in hot places and are sometimes referred to as "thermophiles" or "heat lovers." Some of these thermophiles are responsible for at least a good portion of the heat associated with the hot spots and bin burning known to the trade.

The bacteriologist's part will scarcely have started when the experiment has been completed according to Dr. James. He then has the sample for his studies and literally could spend months on such samples without exhausting all the possibilities for study. A whole life-time might not prove long enough to do the job thoroughly. It would not be sufficient merely to establish that certain organisms cause the heating. The problem

then will be how to combat these organisms without injuring the kernels and employing a method cheaper than the present universal practice of drying the grain before storing. —*Canadian Grain Journal*.

#### SOGES CHICAGO CHAPTER PROGRAM

September, 1951 — Business meeting at Martin's Restaurant. Program: Film: "The Growth of a Nation." Speaker: Walter Berger, President, American Feed Mfrs. Assn.

October, 1951 — Milwaukee Meeting. Tour through Froedtert Malting Co. plant, Milwaukee.

November, 1951 — Tour through Swift & Co. packing plant, Chicago  
December, 1951 — Associates Night party  
January, 1952 — Ladies Night Party  
February, 1952 — Tour through Ford Motor Plant (tentative)  
March, 1952 — Tour through Board of Trade, Chicago  
April, 1952 — Pre-convention meeting  
May, 1952 — Possible tour through Sanitary District, Chicago  
June, 1952 — Business Meeting—Election of Officers

Beware of little expenses. A small leak will sink a great ship. — *Benjamin Franklin*.

## Allied Mills of Buffalo installs its 12th BLACK REXALL BELT

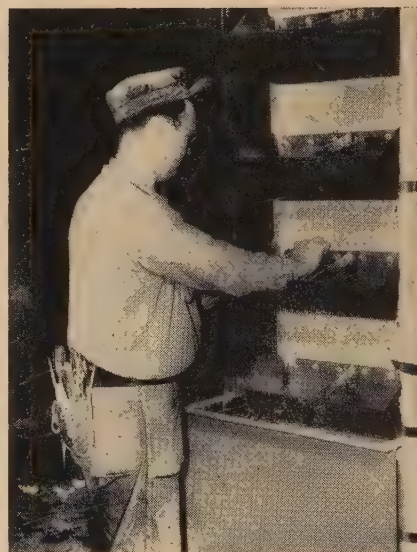
■ Allied Mills have 12 elevators in service, and all are using Black Rexall Belts from 6" to 16" in width. Bob Carpenter, Plant Superintendent, says "The Belts remain flexible and I've never had a stretch problem with a Black Rexall Belt, or encountered any trouble with bolt heads pulling through."

#### Imperial Belts Cost Less to Use

This experience of Allied Mills is not exceptional. It is just another true case history of the operating economy of Imperial's job-designing belting. Black Rexall Belts give longer, more dependable, grain leg service for *less overall cost* because they are made for special, heavy-duty elevating and conveying service.

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Since 1909, Imperial has manufactured industrial belting exclusively. This wealth of experience is the reason why elevators all over the country are standardizing on Imperial Black Rexall Belts for heavy-duty service. It can help you solve your belting problem, too.



#### Heavy-Duty Construction

Black Rexall Belts are constructed of extra heavy (37½-ounce) silver duck. All stitching is Inner-Locked—it will not "run" if a thread is broken. High tensile strength and freedom from stretch are other qualities that give these belts longer life, greater economy.

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# Improvement of Working Conditions

By WILBUR HESSEL

*Engineer, Clark Equipment Co., St. Matthews, Ky.*

THERE are many factors to be considered in any material handling system. Improvement of working conditions is a major aim, and in most cases cannot be measured in dollars and cents. Let us therefore consider it a plus factor.

We then must ask ourselves this question: Who is to gain by improving working conditions, and what are our goals? Priority will first be given to increasing safety. Second, reduction of fatigue. Third, improve personal comforts.

By increasing safety we will have less lost-time accidents. As a result, employer and employe both gain. When fatigue is reduced naturally the employe completes the day less tired, and his production will show gain. Improving personal comforts, I believe all will agree, go hand-in-hand with reduction of fatigue.

Now let us try to map out a plan

to accomplish these objectives. Assume that we want to improve working conditions in the manufacturing departments or we have an installation that is not working up to our expectations, or perhaps we want to sell to management a new materials handling system and get full co-operation from the supervisors and workmen who will become a part of this system.

## Working Rules

The following are some rules that will work if we make them a part of our every thought and action.

1. Talking in terms of the other man's interest.
2. Be sympathetic with the other person's ideas and desires.
3. Be lavish in your praise.
4. Give the other person a fine reputation to live up to.

5. Make the other person feel important, and do it sincerely.

6. Show respect for the other man's opinion.

7. Throw down a challenge.

These, I believe, are very important to success.

## Factors of Success

A few years ago a research was made under the auspices of the Carnegie Foundation for the Advancement of Teachers (and later confirmed by the Carnegie Institute of Technology), which revealed these startling facts: That in such technical lines as Engineering about 15% of one's success is due to one's technical knowledge and about 85% is due to one's skill and human engineering, to personality and ability to lead people.

John D. Rockefeller once said,



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When excessive moisture enters your elevator, grain spoilage follows quickly. Western Waterproofing Company's prompt protective and restorative action, however, checks water penetration at its source. Hundreds of elevator and processing plant owners have thus achieved 10% to 50% more insulation, less mold growth, slower temperature change, and dryer grain.

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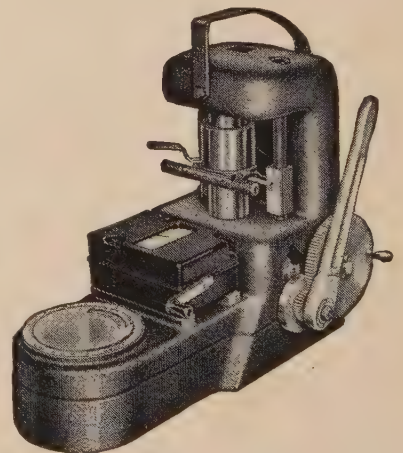
Concrete Restoration	•	Mortar Joint Replacement
Pressure Application of Cement	•	Putting Joints in Movement

For folder "Maintenance and Restoration of Concrete Storage Tanks" write

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"The ability to deal with people is as purchasable a commodity as sugar or coffee, and I will pay more for that ability than for any other ability under the sun."

Let us think about that for a minute, if proven by a survey and Mr. Rockefeller was willing to pay more for the ability to deal with people than any other quality under the sun, perhaps it is time for us as material handling personnel to develop this ability by using the aforementioned rules.

#### Practical Example

About 16 months ago I had the opportunity to install two fork trucks with a particular type of handling device. This device was to handle material from a box car to warehouse, or to highway trucks. We estimated a savings of some \$16,000.00 a year through the use of this equipment.

After the machine had been in service for about 5 months, I was called in by the management and asked these questions, why is maintenance running so high? why are we damaging so much material? The answers were simple. They were not operating the machine as it should be operated. They were not tiering the material in the warehouse as recommended.

But say! Can you tell a man he is all wrong and get co-operation? Visualize if you can, a piece of equipment such as a fork truck sitting on a warehouse floor without an operator. Is that machine capable of destroying itself? Can it damage goods? No! It requires an operator to bring it to life.

Now let us apply the rules. First let us discuss with the workmen the problems, get their ideas as to how the operation can be improved. The first suggestion made by the workmen was to change the method of stacking; instead of placing one along side another, stagger them. We weighed this suggestion and found it would not only save damage, but would increase warehouse space about 5%. This gave me an opportunity to praise the workmen and make them feel important.

The next job was to win the operators to our way of thinking as to how the machine should be operated. First, we must give them a fine reputation to live up to. The two operators were told how they were chosen from the same 14 men, because of their proven ability to do a good job, and we were sure they would continue to do a good job.

Second, we pointed out that their company had spent \$10,000 to give them a piece of equipment to improve their personal comforts and safety, and to relieve the back breaking labor of handling the heavy material. We also mentioned that this machine had elevated them from a common laborer to a machine operator, whose duty at all times is to protect that equipment so as to keep it in good operating condition.

The results of this consultation netted these gains. The maintenance of these two machines dropped from \$150 per month to about \$40 per

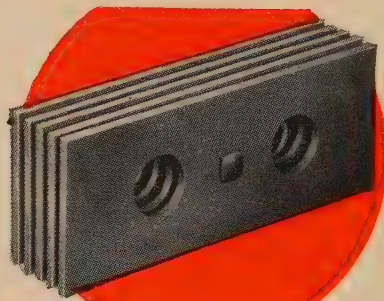
month, a savings of \$1320 a year. Damage was reduced 15% amounting to a saving of about \$7,000 a year.

We said in the beginning that improvement of working conditions is a plus factor in material handling and cannot be measured in dollars and cents, however the end result can show very large gains as shown by this example.

So let us all start today—appeal to the employes to help you improve their working and test the rules for good human engineering.—*Before the American Material Handling Society, Chicago.*

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THE HAMMERS**

**THE BETTER  
THE HAMMERMILL**



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CUSTOM-BUILT**

**PACAL  
HAMMERS OR  
HAMMER CLUSTERS**

Regardless of make, your hammermill is no better than the hammers used in it. Frequent shutdowns for hammer changes . . . improper hammer wear reduce the productive efficiency of any hammermill. Our expert metallurgists are constantly studying hammer wear under all types of grinding conditions to give you the finest hammers available for your particular grinding requirements. Mill owners who are using PACAL hammers and hammer clusters report *three to four times longer wear* than any other hammer they have used. They are enthusiastic about the exclusive features of PACAL clusters that reduce shutdown time for hammer changes to a minimum. Get the maximum efficiency from your hammermill . . . insist on PACAL hammers or hammer clusters.



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# Plants and People

## BECKER REPLACES JOSLYN

Frank Becker has replaced George Joslyn as Superintendent of the J. J. Badenoch Terminal elevator and feed manufacturing plant in Chicago. Mr. Becker has been with the J. J. Badenoch Company for 18 years.

## CROMBIE RETIRES

Frank Crombie has retired from the Continental Grain Company, Chicago. Oscar Regnier, who has

been the Asst. Supt. at their terminal elevator has been made Superintendent, and Jim Crombie is now Assistant Superintendent.

## TINKHAM TO MILWAUKEE

The resignation of W. M. Tinkham, spring wheat area Products Control supervisor and a General Mills employe for 37 years was announced on Aug. 27. He is now Plant Manager of the Krause Milling Company, Milwaukee, Wis. His successor at General Mills is O. A. Oudal.

Mr. Tinkham attended Minneapolis schools and was graduated from the University of Minnesota in 1914. He

joined the old Washburn Crosby Company the same year and in 1916 moved over to the mill where he was in charge of Products Control.

He remained at the mill until 1938 when he was transferred to Chicago to head the Central Division's Products Control for General Mills. He returned to Minneapolis in 1942 and since that time has served in various capacities as an assistant to the director in the Products Control Department.

## HAPPY BIRTHDAY!

We extend birthday greetings this month to the following who arrived on earth in September:

- Sept. 7—W. August Augustson, Van Dusen - Harrington Co., Minneapolis.
- Sept. 8—Charles J. Winters, Public Grain Elevator, New Orleans.
- Sept. 11—Hy Arendall, Innis Speiden Co., Omaha.
- Sept. 14—C. A. MacIver, Archer-Daniels-Midland Co., Minneapolis.
- Sept. 14—Walter Teppen, Russell-Miller Milling Co., Duluth.
- Sept. 17—Rolla Ladd, The Drackett Co., Cincinnati.
- Sept. 20—Arthur J. J. Meyer, McCabe Bros. Grain Co., Ft. William, Ont.
- Sept. 22—Victor H. Reid, Reid-Strutt Co., Portland, Ore.
- Sept. 24—Cornelius H. Halsted, General Mills, Inc., Buffalo.
- Sept. 28—Albert S. Krotz, Buffalo.

(Send in your birth dates please, so we may wish you the same.)

## QUAKER OATS BUYS LAND

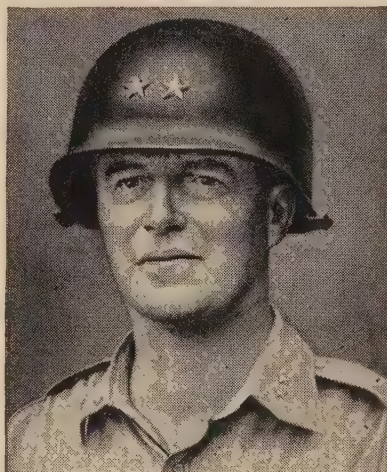
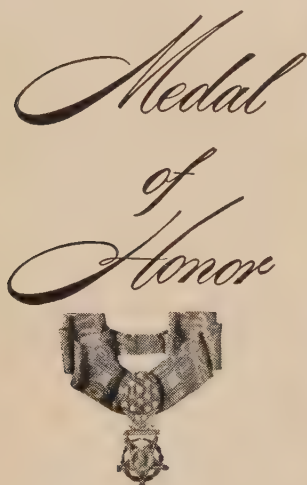
The Quaker Oats Company has purchased approximately 8 acres of land near Stockton, Calif., for possible future expansion of its Ful-O-Pep livestock and poultry feed production, according to I. S. Riggs, manager of the company's feed department.

While the plot was purchased with Ful-O-Pep expansion in mind, the company has no present plans for construction, Mr. Riggs said. Stockton was selected as a possible feed mill site because it provides a pivotal distribution center for central California.

## ITALIANS ARE ON THEIR TOES!

First letter received by us, addressed to the new name of SOGES—Society of Grain and Processing Superintendents—(which name will become official after next national convention) was from the Italian Trade Commission, Boston, Mass., dated Aug. 21, 1951.

Contents were an invitation to Society as a whole or individually to participate in the First International



Major General William F. Dean, of Berkeley, California—Medal of Honor. In the hard early days of the Korean War, when it was Red armor against American rifles, General Dean chose to fight in the most seriously threatened parts of the line with his men. At Taejon, just before his position was overrun, he was last seen hurling hand grenades defiantly at tanks.

General William Dean knew in his heart that it's every man's duty to defend America. You know it, too. The General's job was in Korea and he did it superbly well. Your defense job is here at home. And one of the best ways to do that job is to start right now buying your full share of United States Defense\* Bonds. For remember, your Defense Bonds help keep America strong. And only through America's strength can your nation...and your family...and you...have a life of security.

Defense is your job, too. For the sake of all our servicemen, for your own sake, help make this land so powerful that no American again may have to die in war. Buy United States Defense\* Bonds now—for peace!

Remember when you're buying bonds for defense, you're also building personal cash savings. So join the Payroll Savings Plan

where you work, or the Bond-A-Month Plan where you bank. For your country's security, and your own, buy U. S. Defense Bonds!

**\*U.S. Savings Bonds are Defense Bonds - Buy them regularly!**



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This alfalfa plant at Windsor, Colo. is one of 51 similar plants of the W. J. Small Co., now an ADM Division

Food Fair which is to be held Sept. 12 to 25 at Parma, Italy.

### SOGES NEW MEMBERS

No. 977—Millard S. Campbell, Norris Grain Co., Blue Springs, Mo.

No. 978—Charles W. Fredenburg, Industrial Materials Co., Chicago, Ill.

No. 979R—Axel Lee, F. H. Peavey & Co., Concrete Elevator, Minneapolis, Minn. (Replaced Clyde Thorildson).

No. 980—W. F. Lane, Perry Burrus Elevator, Dallas, Tex.

No. 981R—Fred J. Waterous, Good-year Tire & Rubber Co., Kansas City, Kans. (Replaced John J. Writt).

No. 982—John E. Wiant, The Ohio Grain Co., Mechanicsburg, Ohio.

### ADM ACQUIRES LARGEST DEHYDRATED ALFALFA MEAL PRODUCER

Purchase of The W. J. Small Company, Inc., by Archer-Daniels-Midland was announced on Aug. 27 by T. L. Daniels, ADM president. Recognized as the world's largest producer of high quality dehydrated alfalfa meal, the company will operate as the W. J. Small Company Division of Archer-Daniels-Midland Company.

All milling and warehousing assets of the The W. J. Small Company are being taken over. These include dehydrating and blending plants, warehouses, cold storage plants, and the shops where the company designs and manufactures its own field choppers, self feeders, dehydrators, hammer mills, and other equipment.

W. J. Small, founder and president of the company, is credited with being the pioneer in the dehydrated alfalfa meal industry. It was in 1931 that he opened his first dehydrating plant at Neodesha, Kans. The firm acquired a reputation for quality and expanded rapidly until it now has over 1,000 employees. It operates 51 plants located in eight states (Kans., Nebr., Mo., Colo., Ill., Ariz., Okla. and Tenn.).

It is said to be the only producer of dehydrated alfalfa meal which uses cold storage facilities to preserve the important carotene content and other

nutritive qualities which have made the meal so much in demand. Control laboratories are maintained at all blending plants and at many production centers. Uniformity of product is maintained by testing each lot for color and quality.

Although the principal harvest season lasts from April to November, the company operates 12 months a year.

Small will continue in active charge of all operations and has been named a vice-president of Archer-Daniels-Midland Company. General offices will remain at Neodesha, Kans., and sales offices will be continued at 1200 Oak Street, Kansas City, Mo.

### DEATH OF ROBERT STERLING

Robert E. Sterling, Editor of *The Northwestern Miller*, Chairman of the Board of The Miller Publishing Co. and manager of its Kansas City office until his retirement in 1949,

died Aug. 29 at St. Lukes Hospital in Kansas City, Mo. He was 75 yrs. old. Funeral services were held Aug. 31 at 2 p.m. at Grace and Holy Trinity Cathedral in Kansas City.

The son of a carriage builder, millwright and milling engineer, Mr. Sterling joined the Miller Publishing Co. as Kansas City correspondent in 1898 when he was circulation solicitor for the Kansas City Times. Several months later, the firm opened a Kansas City office with Mr. Sterling in charge.

The milling industry in the Kansas City area then was in the beginning of its spectacular growth, and Mr. Sterling's career as correspondent, advertising salesman and finally editor grew with it. In 1924 he joined with other members of the staff in the purchase of a controlling stock interest in the Miller Publishing Co., and from that time until his retire-

# Still 1<sup>st</sup> Choice

## of the GRAIN, FEED and MILLING INDUSTRIES!

Indented belt holes embed belt and provide better traction over pulleys.

Ends welded to body flanges provide great strength and added life.

High sides follow contour of adjoining buckets on belt — eliminate loss gaps.

High Lip scoops up a big load and retains it.

Wide bottom provides for greater fill and carrying capacity.

**ITS PERFORMANCE IS UNEQUALED!**  
 Nu-Hy Buckets have proven to Elevator and Mill Operators everywhere that their design and construction promote the highest efficiencies in any size leg and operating at any speed.

Long life is assured through durable construction . . . Nu-Hy Buckets never fall apart in service . . . hence they pay for themselves over and over again.

**Write for free FORM No. 76 to enable us to analyze your operations and make recommendations.**

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## Mark the Spot

### FOR EFFECTIVE DUST AND GAS PROTECTION

#### ROBERTSON Explosion Ventilators

##### WILL

Remove the more explosive fine dust from the leg by continuous gravity action

##### WILL

Release pent-up gases and flames in case of an explosion

##### WILL

Minimize the possibility of a secondary explosion by continuously venting gases

#### ROBERTSON Ventilation Engineers

##### WILL

Inspect your elevator and recommend proper sizes and number of ventilators to secure maximum protection at minimum expense.

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Farmers Bank Building  
Pittsburgh, Pa.

ment he was Editor and Board Chairman.

For many years he was secretary of the Kansas City Millers Club and the Kansas City Flour and Feed Club. He rarely missed a meeting of the Millers National Federation, and in 1951, when illness prevented him from being at the session, he was given a special greeting for his service to the industry.

His civic activities extended to membership in the Kansas City Zoning Board, agricultural vice president of the Kansas City Chamber of Commerce and to membership in numerous other business and community organizations.

Mr. Sterling was born at Girard, Kansas July 17, 1876; spent his boyhood at Sparta, Ill., Winfield, Kans. and Le Mars, Iowa, and completed high school at Le Mars in 1894. He worked for a time as reporter and subsequently local editor of the *Le Mars Daily Sentinel*, before moving to Kansas City.

In 1906 he married Anna Marie Kirk of Kansas City. She died in 1918. Of their two daughters, Mrs. Anita Kasson of Kansas City survives. Ruth Kirk Sterling died in 1949.

#### OUT-OF-TOWN VISITORS

Harry Erickson, Lauhoff Grain Co., Danville, Ill.

Clarence Turning, Kenosha, Wis. M. M. Darling, The Glidden Co., Indianapolis.

George Patchin, Appraisal Service Co., Minneapolis.

Harold Wilber and John Winings, A. E. Staley Mfg. Co., Decatur, Ill.

A. B. (Art) Osgood, The Day Co., Minneapolis.

Charles J. Winters, Public Grain Elevator, New Orleans.

Russell B. Maas and Harvey Carlson, Screw Conveyor Corporation, Hammond, Ind.

Oscar W. Olsen (retired), Globe Elev. Div., F. H. Peavey & Co., Duluth.

#### TEN GRAIN PROCESSING COMPANIES QUALIFY WITH REPORTS

From the 5,000 corporation annual reports for 1950 rated in the 11th Annual Survey, conducted by Weston Smith of *Financial World*, these 10 grain processing companies have qualified for "Highest Merit" citations:

Arcady Farms Milling Co., Chicago; Centennial Milling Co., Spokane, Wash.; Central Soya Co., Fort Wayne, Ind.; Froedtert Grain & Malting Co., Milwaukee; General Mills, Inc., Minneapolis; Omar, Inc., Omaha; Pillsbury Mills Co., Minneapolis; Quaker Oats Co., Chicago; A. E. Staley Mfg. Co., Decatur, Ill.; Standard Milling Co., New York.

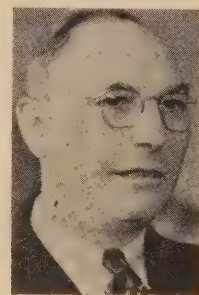
The stockholder reports of these companies have thus become candidates for the final judging, and one

will be selected for a "Best of Industry" award and presented with a bronze "Oscar of Industry" at the *Financial World* Annual Report Awards Banquet on Monday, Oct. 29, 1951, in the Grand Ballroom of the Hotel Statler in New York. Last year the annual report of A. E. Staley Mfg. Co. won the trophy for the best report in this industrial classification.

The independent board of judges in this year's competition is headed by Carman G. Blough, C.P.A., research director of the American Institute of Accountants; Denny Griswold, publisher of *Public Relations News*; Elmer C. Walzer, financial editor of the *United Press*; Guy Fry, past president of the National Society of Art Directors; and Dr. Pierre R. Bretey, president of the National Federation of Financial Analysts Societies, who is being assisted by twenty of the top analysts of the New York Society of Security Analysts.

#### STRONG MAN OF THE NORTH

Although it may not be quite true that John E. (Spike) Carlson can push along a loaded boxcar with his hands, as they fondly boast in the Peavey



J. E. (Spike) Carlson

Terminal Elevator, Duluth, where he is superintendent, the fact remains that he bulks large physically, and has excessive strength.

Right now they are talking about him in Peavey circles because his elevator went over the 200,000 man-hour mark without a lost-time accident, an unprecedented record with that house. Further, he has just completed 39 yrs. of service with the Peavey System. Chronicling this recently the *Grainville Bugle* went on to review "Spike's" life as follows:

"Born May 21, 1890 on a farm in Finland, Spike began developing his strength working on that farm at a very early age. He left the home farm when 18 yrs. old and came to the copper mines of Ironwood, Mich., where his sister and brother lived and worked. 'Spike,' too, went down into the heat hundreds of feet underground to work the mines, but in the fall of 1910, he pushed on west through Duluth and went to work in the lumber camps of northern Minnesota, where men were usually strong, but where 'Spike' was considered a modern Paul Bunyan.

"He shoveled his first scoopful of grain for the Peavey Company in the fall and early winter of 1911, and after another short hitch in the lumber camps, returned in March, 1912, to Peavey employment and has never left it since.



"Starting as a shoveler, he soon became spouter. The next year he was spouter and weigher at Globe terminal at Superior. In 1917 he moved back to the Peavey terminal in Duluth, then back to Globe as weighman and, later, assistant down stairs there.

"He continued to shuttle . . . to the Peavey house on the bull-gang, to the Globe as foreman, then back to the Peavey Terminal again as foreman in September, 1923, holding that job until April, 1949, when he became superintendent.

"He takes considerable pride in the condition of his 'house,' which holds 7 million bus., the largest capacity of any Peavey elevator. Its equipment includes a marine leg, installed in 1934 and a thousand-bushel Hess dryer installed in 1944.

"Today his summer home on Schultz Lake, 21 miles from Duluth, gives him opportunity to keep in shape by fishing, hunting and swimming.

"Mrs. 'Spike' likes the cottage, too, although their children are now all grown, ' . . . married and scattered around,' as 'Spike' tells it. There are seven children of whom two live in Duluth. And 'Spike' is a grandfather seven times.

"Although he can still out-shovel and out-work the best of his crews, 'Spike' has made some plans for the future. He won't make that future a rocking chair retirement. He'll be in California during the winter months but when spring rolls around he'll be pitching a plug at the bass on Schultz lake, stalking the deer in the woods in the fall, and generally making life enjoyable for those around him with his picturesque speech and quiet humor."

## BURLAP STOCKS LOWER

United States stocks of burlap of all constructions, spot and afloat, totaled 170,981,000 linear yds. on April 1, 1951, as compared with 203,192,000 yds. on Dec. 31, 1950, according to a survey completed July 20 by the National Production Authority, U. S. Dept. of Commerce.

The Fibers Branch of NPA's Textile Division, which collaborated with the Bureau of the Census in making the survey, reported that importing bag manufacturers were the largest holders of burlap stocks.

On the above date, their stocks amounted to 102,747,000 yards of which 47,598,000 yds. were of the 7½-oz. construction, 36, 40 and 45-inch widths, and 25,848,000 yds. (10-oz.) of the same widths. On December 31, 1950, stocks totaled 113,862,000 yds., of which 56,241,000 were of the 7½-oz. construction and 29,398,000 of the 10-ounce.

Burlap importers' stocks amounted to 21,073,000 yds. of which 6,596,000 yds. were 7½-oz. and 6,538,000 of the

10-oz.. On Dec. 31, 1950, they totaled 31,372,000 yds. of which 11,413,000 yds. were 7½-oz. and 10,075,000 of the 10-oz.

## GRAIN ELEVATORS STARTED IT

Lightning protection of the White House in Washington has just been completed by the George E. Thompson Co., Minneapolis. Since 1885 the Federal Government has been protecting its buildings from lightning. That year an installation was made on the Washington Monument after it had been struck twice.

The 40-year old Minneapolis concern got its start in the lightning protection industry protecting grain elevators. In that period it has made and installed protective systems on many elevators in the grain belt.

## NEW FAIRBANKS MORSE PLANT

Construction of a new plant near Kansas City, Mo., for Fairbanks, Morse & Co., will be started at once by the stone & Webster Engineering Corporation, it is announced by Robert H. Morse, Jr., President. Originally planned as a scale plant, it has now been enlarged to approximately 500,000 sq. ft. of floor space, which includes a foundry, and is to be used to make engines and pumps.

The new plant will be a one-story structure and is to be constructed of brick and reinforced concrete. Including machinery and equipment, the cost is placed at \$7,500,000. When in operation, it is expected there will be nearly 1,000 employees.

## NEW BOX CARS ON ORDER

June production of new domestic freight cars was maintained at substantially the same level as in May, deliveries during the month totaling 9,644, the American Railway Car Institute and the Association of American Railroads announced jointly on July 6.

"The 10,000-car-a-month program has been substantially achieved for the time being", the statement said, "but production will begin to slide in the fall unless present steel allocations and receipts are increased".

Orders for 6,793 freight cars were placed in June, and the backlog of cars on order on July 1 was 147,725. Of this number, 3,182 were box cars with a backlog of 49,219 box cars.

## IN THE HOPPER

It had been a long and losing game. As the thoroughly trimmed poker player tip-toed into the house, he was met by his wife.

"Judging by the hours you keep," she said acidly, "a person would think you didn't own a home."

"And right now," the trimmee said sadly, "that person would be right."

*Smart Guy (sitting in barber chair):*  
"Cut all three short."

*Barber:* "Which three?"

*Smart Guy:* "Whiskers, hair and chatter."

Customer: "You made a mistake in that prescription I gave my wife. Instead of quinine you used strychnine."

Druggist: "You don't say. Then you owe me 20 cents more."

## Fire and Dust Proof Removable Section

# ELEVATORS

## ELEVATOR CASINGS

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## THE "MILWAUKEE" CYCLONE DUST COLLECTOR

## COMPLETE ELEVATING AND CONVEYING SYSTEMS

# L. BURMEISTER CO.

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THAT  
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CUPS  
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MADE STRONGER  
WILL  
LAST LONGER  
HAVE  
GREATER CAPACITY**

and will operate more efficiently  
at less cost than other elevator cups.

"DP" - "OK"

"CC" - "V"

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**K. I. WILLIS  
CORPORATION  
MOLINE, ILLINOIS**

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A city fellow was trying to impress his country cousin, so he said: "Yesterday we taxied to the country club and golfed until dark; then we trolleyed back to town and danced until morn."

But the farmer, not to be outdone, had his say: "I had a busy day, too. I muled to the corn field and ge-hawed until sundown. Then I suppered till dark and piped until nine. I climbed the stairs and bedstedded until dawn, then breakfasted until it was time to go muling again."

*The cashier in a Chicago movie house was selling tickets as her friend looked on. A customer bought a \$1.20 ticket, threw down \$1.25, and walked away leaving his change. "Does that happen, often?" asked the friend.*

*"Sometimes," she replied.*

*"What do you do in a case like that?"*

*"Oh," said the cashier, "I always rap on the window with a sponge. If they don't answer I keep the change."*

"Have you been to any other doctor before coming to me?" asked the grouchy physician.

"No, sir," replied the patient. "I went to a druggist."

"You went to a druggist?" exclaimed the doctor. "And what idiotic advice did the druggist give you?"

"He told me to come to see you," replied the patient.

*An old Scotch bachelor received a request from an organization in London to take care of a dozen evacuated children during the blitz. The Scotchman refused on the basis that he hated kids. He was then asked to house six expectant mothers instead. "All right," the Scot replied, "but the gals mustn't expect too much. I am past 70 years."*

## CLASSIFIED

### HELP WANTED

**FOREMAN** — Man capable of handling small general grain elevator located in large Wisconsin city. Must have general knowledge of grains and maintenance. State experience, age, salary and availability. Write Box 92, Grain Magazine, Board of Trade, Chicago, 4, Ill.

### SITUATIONS WANTED

Man with 25 years experience in the grain and feed business. 18 years as manager. Would like position, preferably in Illinois. Am 46 years old and can furnish excellent references. Write Box W-7, Grain Magazine, Board of Trade, Chicago 4, Ill.

Position as Grain Inspector, 25 years experience. Acquainted with elevator work and boat loading. Held USDA Inspectors' license for 10 years. References on request. Write Box W-5, Grain Magazine, Board of Trade, Chicago 4, Ill.

### FOR SALE

**FOR SALE** — Two new Vacuators purchased about a year ago but have never been used. A truck loading cyclone and extra spouting with each machine. Hercules gasoline motor on each. Box Y-1, Grain Magazine, Board of Trade, Chicago 4, Ill.

**FOR SALE** — Large Anglo molasses mixer with 50 HP motor. One small Anglo molasses mixer. One large California pellet mill. One Haines molasses mixer. One Sizer Hi-Molasses pellet mill. Box Y-2, Grain Magazine, Board of Trade, Chicago 4, Ill.

**FOR SALE** — 8-24 ft. lengths of 22 Gage metal pipe with elbows and steel flanges at \$2.00 per ft. Box Y-3, Grain Magazine, Board of Trade, Chicago 4, Ill.

**FOR SALE** — Grain Elevator in corn belt area in Northwest Indiana. The property is being offered for the unbelievably low price of \$14,500 (half cash) due to ill health of the owner-manager. For full particulars, write Box V-12, Grain Magazine, Board of Trade, Chicago 4, Ill.

**FOR SALE** — Three grain elevators near Lubbock, Tex. 100,000, 40,000, and 10,000 bus. capacity. Good milo crop. Money makers. Write Box 1718, Amarillo, Tex.

### ERGOTY SCREENINGS

Watch top scalp or mill oat stream of your rye, barley, durum screenings for ergot. Send representative sample for an arbitration and offer.

**UNIVERSAL LABORATORIES  
DASSEL, MINNESOTA**

## BETTER BRUSHES FOR EVERY USE!



**STAR**

**Warehouse Push Broom**

This is the broom that is used by most large terminal elevators for sweeping grain out of box cars.

### Quality Separator Brushes



We can furnish highest quality separator brushes for any machine.

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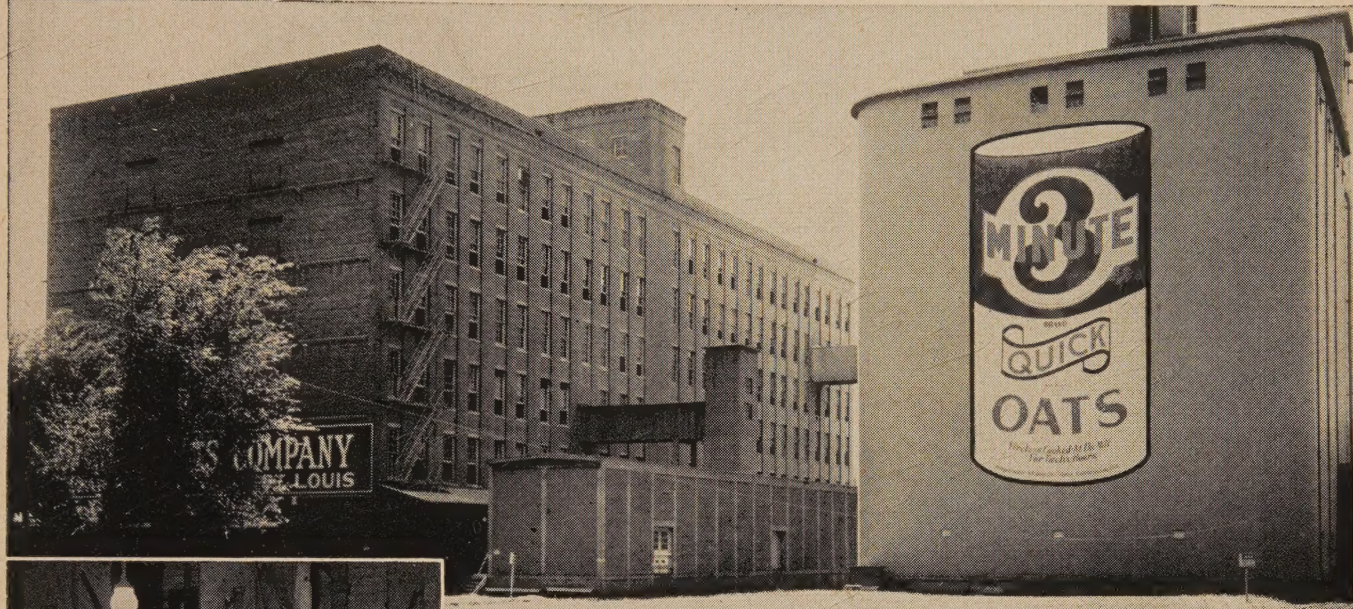
**FLOUR CITY BRUSH COMPANY** MINNEAPOLIS 4, MINN.



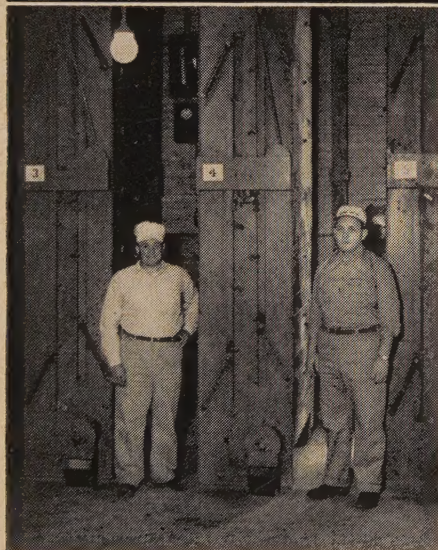


# "Our SUPERIOR EQUIPMENT has given us top performance"

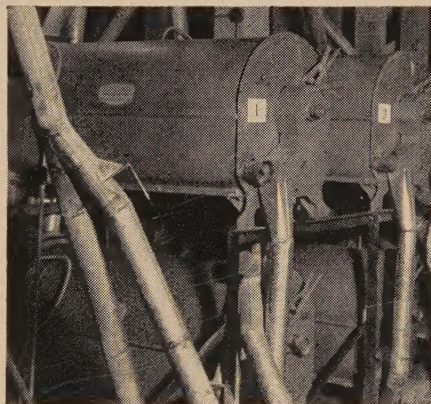
Says Cecil Van Fleet, Superintendent National Oats Company



**ORIGINATORS AND EXCLUSIVE MILLERS** of 3 Minute Oats, the National Oats Company maintains several huge plants, including this one at Cedar Rapids, Iowa.



**TOP PERFORMANCE** in limited floor area is sought by all processors, and here is where the S14 Width Grader with its unique design stands out (National Oats has 10 of them at Cedar Rapids). Absolute uniformity of width separation through precision screens and unique gravity flow coupled with large capacity is assured by Superior Width Graders. If you demand additional **CAPACITY** in limited **FLOOR AREAS**—here is your answer.



**TOP PERFORMANCE**—a full yield of high quality product from all grains processed—is a famous feature of the Superior C56 machine (National Oats has installed 26 of them in the Cedar Rapids plant alone during the last four years). The C56 machine features precision-made indents that assure uniform accuracy of length separation. This machine is a favorite with grain men because it invariably fulfills two paramount requirements—**QUALITY—YIELD**.



**TOP PERFORMANCE** stems from "tailored-to-measure" installations that fully utilize available floor space. If space is a problem, if production capacity is a problem, why not let our engineers go over your requirements with you. They'll help you select machinery exactly suited to your requirements. Write Dept. 25, Superior Separator Company, Hopkins, Minnesota, and a representative will contact you personally at your convenience.

## AMONG DOZENS OF OTHER LARGE SUPERIOR-EQUIPPED PROCESSORS ARE:

- Archer-Daniels-Midland
- General Foods, Inc.
- General Mills, Inc.
- International Milling
- Ogilvie Flour Mills, Ltd.
- Pillsbury Mills, Inc.
- Quaker Oats

# SUPERIOR

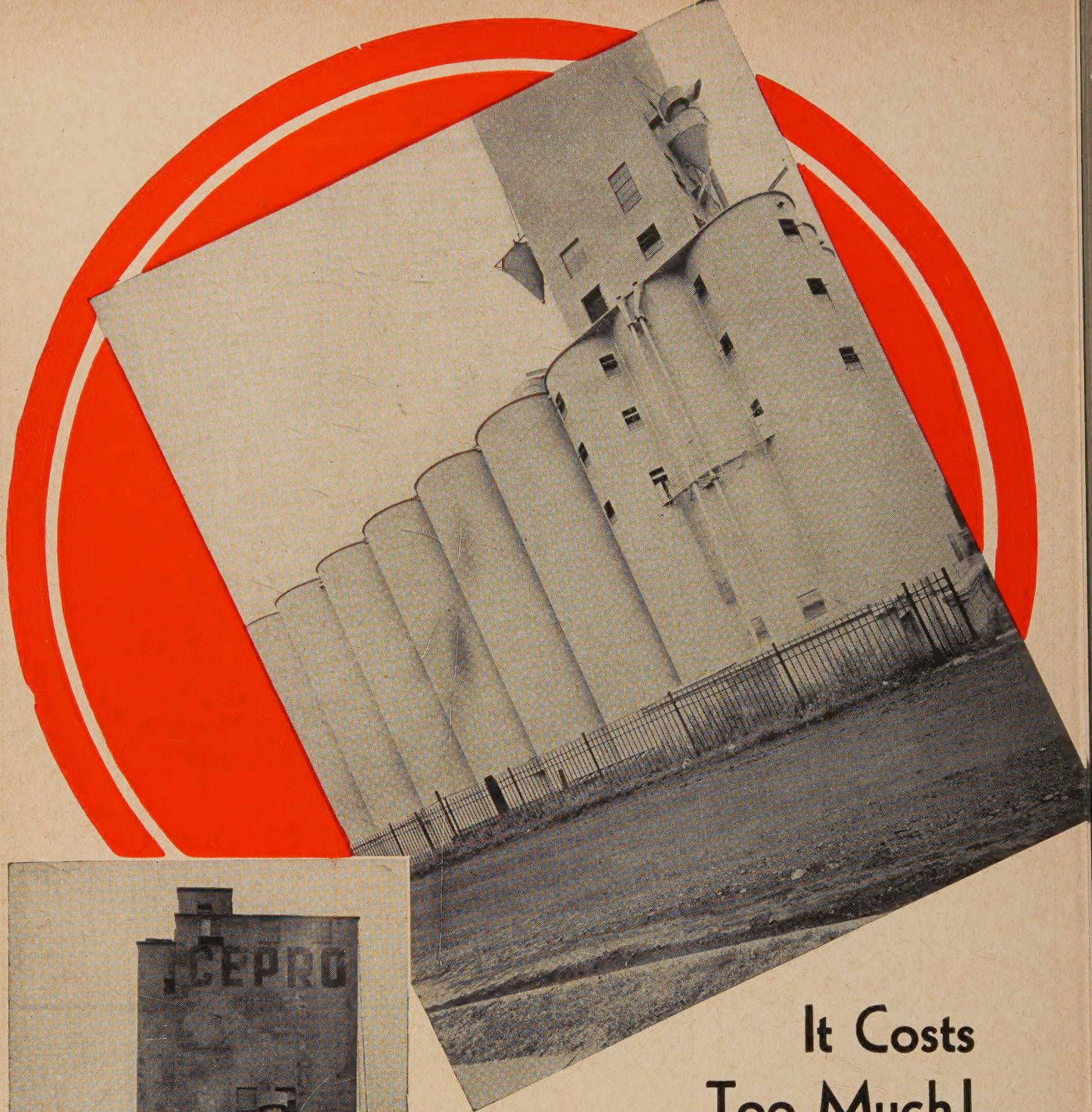
# SEPARATOR

# COMPANION

Hopkins Minnesota







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**Y**ES, That's Right!!... It Costs Far Too Dearly To Permit Your Plant Restoration Work To Be Delayed Even a Single Season . . . Those With Costly Past Experience Know That The Rate Of Deterioration ZOOMS Upwards With The Passing Of Each Successive Year . . . Hence The Cost Of An Intelligent Periodic Building Maintenance Program Quickly And Profitably Liquidates Itself IN EVERY WAY!

**Y**OU, Too, Will Find That Protecting Your Investment Is Especially Wise, Particularly When You Can Depend So Completely Upon . . .



Every Day The Elements Are Gnawing Away at Your Properties, Eating Up and Tearing Down Your "House Of Cards." Why Not Protect Yourself As Best You Can By Consulting With . . .

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